REMARKS

The Office Action has been carefully reviewed and by this Amendment, Applicant has canceled claims 20 and 21, amended claims 1 and 14, and added claims 26 and 27. Claims 1-27 are pending in the application. Claims 2, 9-13, 15 and 22-25 have been withdrawn.

The Examiner rejected claims 6 and 19 under 35 U.S.C. 112, first paragraph, as not being enabled by the specification. Specifically, the specification did not set forth the reflecting metal consisting of gold or nickel as set forth in claims 6 and 19. By this Amendment, Applicant has included a description of the reflecting metal commensurate with that set forth in the claims as originally filed. Accordingly, no new matter has been added. Favorable reconsideration and withdrawal of the rejection is requested.

The Examiner rejected claims 1, 3-8, 14 and 16-21 under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 4,010,690 to Cocozella et al. ("Cocozella").

As set forth herein, the present invention is directed to an *encased* munition. An encased munition is one having a casing wall that encloses the explosive and is deployed with the explosive for detonation. As discussed in the specification on page 1, line

23 through page 2, line 16, the encased munition provides different explosive output as compared with explosives that are detonated without a casing.

According to the present invention, the inner surface of the casing wall is provided with an optical reflecting layer that is highly reflective in the optical and infrared spectrum in order to *inwardly reflect electromagnetic radiation generated upon detonation* in order to increase the performance output of the exploding munition. This is not shown or suggested by Cocozella.

Cocozella is directed to a fire protection casing 12 that envelopes a *caseless* ammunition round 10 to protect it from accidental ignition as may occur due to the close proximity of an adjacent flaming round when multiple *caseless* rounds are deposited in a belt. The casing 12 includes an outer layer of intumescent material overlying an insulating layer 30 that is coated with a heat reflecting coating 32. The coating 32 is designed to reflect heat incoming from the intumescent material *away from the munition* 10 and back into the intumescent material in order to accelerate activation of the intumescent material. Activation of the intumescent material results in a stable char that protects the round for a greater length of time (see column 2, lines 33-38 and lines 49-68, and column 3, lines 1-5).

A heat sink layer 20 surrounding the round 10 provides a further layer of protection, serving to distribute heat absorbed from the casing 12 and prevent hot spots which could result in accidental ignition of the munition (column 2, lines 28-31). By no means is the heat sink layer 20 configured to reflect heat and/or electromagnetic energy *toward the munition*, as this would be completely counter to the intended insulating function of the casing 12 which purposes to reflect heat energy *outward*.

Further, the fire protection casing according to Cocozella *must be removed before the round is ready for use* (see column 1, line 34-37). To facilitate this removal, the casing 12 is formed as a wrap that is provided with a flap 28 which is used by a mechanical means within the armament system to strip the casing from the round (see column 3, lines 34-37). Clearly, since the fire protection casing is removed before the caseless round is loaded into the armament system for deployment, and hence is not present at detonation, the casing cannot provide an enhancement of detonation output as is claimed by the present invention.

In sum, Cocozella is directed to an entirely different problem, namely protecting the caseless ammunition prior to insertion of the round into an armament system, and therefore serves to *prevent* detonation. There is nothing in Cocozella that

would suggest an *encased* munition enclosed by a permanent casing having an inner liner that remains adjacent the munition throughout both the storing and exploding processes and which acts *to enhance the explosive output* of the munition *upon detonation*, as claimed by the present invention.

For at least the foregoing reasons, claims 1 and 14 along with the claims dependent thereon are patentable over Cocozella. Favorable reconsideration and allowance thereof is requested.

New claims 26 and 27 are further in condition for allowance as there is nothing in the prior art that teaches an encased munition having a casing wall that is reinforced with radially spaced, longitudinally extending members that are made of a stronger material than the casing wall. Support for these claims is found in the specification on page 12, lines 10-22.

With this amendment and the foregoing remarks, it is respectfully submitted that the present application is in condition for allowance.

Should the Examiner have any questions or comments, the Examiner is cordially invited to telephone the undersigned attorney so that the present application can receive an early Notice of Allowance.

Respectfully submitted,

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